IN THE CLAIMS:

Please cancel original claims 1-34 in the underlying PCT application, without prejudice.

Please add new claims 35-70, as follows:

35. An electromechanical connection between electronic circuit systems and substrates, comprising the electronic circuit system and substrate mechanically connected to one another, and electrical connection elements which face one another on the electronic circuit system connected in an electrically conductive manner by means of microcapsules formed from grains which are coated with a dielectric and which are at least partially electrically conductive, wherein the dielectric of the microcapsules is broken open at least on areas which face the electrical connection elements to provide exposed areas of the grains, and an electrically conductive soldered joint is formed between the exposed areas of the grains and the electrically conductive connection elements.

36. The electromechanical connection according to claim 35, wherein the mechanical connection between the electronic circuit system and substrate is made by means of an adhesive.

37. The electromechanical connection according to claim 36, wherein the adhesive is formed from a polymer.

38. The electromechanical connection according to claim 36, wherein the microcapsules are embedded in the adhesive.

39. The electromechanical connection according to claim 35, wherein the mechanical connection between electronic circuit system and substrate is formed by a soldered joint between connection elements which are inactive in the intended electronic functioning of electronic circuit system.

40. The electromechanical connection according to claim 35, wherein the grains are electrically conductive metal grains selected from the group of metals consisting of copper, nickel, silver, and gold.

41. The electromechanical connection according to claim 35, wherein the grains are electrically conductive metal grains of a solderable metal alloy.

42. The electromechanical connection according to claim 35, wherein the grains are metallized insulating grains.

43. The electromechanical connection according to claim 42, wherein the grains are silver-plated tin oxide grains.

44. The electromechanical connection according to claim 35, wherein the dielectric is an insulating enamel.

45. The electromechanical connection according to claim 44, wherein the insulating enamel is a soldering flux.

46. The electromechanical connection according to claim 35, wherein the electrically conductive soldered joint between the connection elements is formed by layers of solder which are provided on the connection elements to form intermetallic phases comprising material of the electrically conductive grains of the microcapsules and the layers of solder.

47. The electromechanical connection according to claim 46, wherein a metal selected from the group consisting of tin, indium and gallium is used as the material for the layers of solders.

48. The electromechanical connection according to claim 46, wherein a metal alloy having a low melting point is used as the material for the layers of solder.

49. The electromechanical connection according to claim 47, wherein the layers of solder comprise layers of tin which have been deposited selectively without the use of an electric current.

50. The electromechanical connection according to claim 35, wherein the electrical connection elements comprise a metallic material which is matched to the metallic material of the conductive grains.

51. The electromechanical connection according to claim 50, wherein the connection elements comprise a metal selected from the group consisting of copper and nickel.

52. The electromechanical connection according to claim 35, wherein the microcapsules are provided in a single layer, said microcapsules being of a uniform size and embedded in a polymer film.

53. The electromechanical connection according to claim 35, wherein the grains are electrically conductive metal grains covered with an insulating enamel, which grains at least in part consist of a solder metal.

54. The electromechanical connection according to claim 53, wherein the electrically conductive grain of the microcapsules consist entirely of solder metal.

55. The electromechanical connection according to claim 53, wherein the solder metal is selected from the group consisting of tin, indium, and gallium.

56. The electromechanical connection according to claim 53, wherein the solder metal is a soft-solder alloy.

57. The electromechanical connection according to claim 53, wherein a solderable metal is used for the connection elements of electronic circuit system.

58. The electromechanical connection according to claim 57, wherein the solderable metal is selected from the group consisting of copper, nickel, silver, and gold.

59. The electromechanical connection according to claim 53, wherein the electrically conductive grains of the microcapsules are formed from an electrically conductive metal core which is covered with a solder material.

60. The electromechanical connection according to claim 59, wherein the electrically conductive metal core is comprised of copper.

61. The electromechanical connection according to claim 59, wherein the covering of the core is comprised of tin.

62. The electromechanical connection according to claim 35, wherein the electrically conductive grains of the microcapsules have a diameter of about 10 μm.

63. The electromechanical connection according to claim 61, wherein the tin covering of the core has a thickness of about 200 nm.

64. The electromechanical connection according to claim 46, wherein the layers of solder which are applied to the connection elements have a thickness of about 10 μm.

65. A method for producing the electromechanical connection according to claim 35, comprising compressing the microcapsules under a force such that the dielectric

coating on the grains is broken open, and producing the soldered joint by diffusion soldering.

66. The method according to claim 65, further comprising applying layers of solder metal to connection elements in a thickness such that, during a diffusion-soldering process, the solder metal is completely converted into an intermetallic phase.

67. The method according to claim 65, wherein the microcapsules have electrically conductive grains consisting entirely of solder metal, and connection elements which are free of solder metal, further comprising selecting a thickness of the connection elements so that sufficient material is available for a transformation process during the diffusion soldering.

68. The method according to claim 65, wherein the microcapsules have electrically conductive grains comprising an electrically conductive metal core covered with a solder metal, and wherein the connection elements are free of solder metal on electronic circuit system and substrate, further comprising selecting the thickness of the connection elements and the solder metal in such a way that there is sufficient material, during the diffusion soldering for a transformation process.

69. The electromechnical connection according to claim 62, wherein the diameter of the microcapsules is less than 10 µm.

70. The electromechanical connection according to claim 64, wherein the layers of solder have a thickness of less than 10 µm.